

ABSTRACT OF THE DISCLOSURE

A method for use in manufacturing a semiconductor device includes forming a photoresist pattern on a substrate, performing first etching process in which an initial trench is formed using the photoresist pattern as a mask, and performing second distinct etching process to enlarge the initial trench. Thus, the initial trench can be formed using the photoresist pattern having a stable structure. Thereafter, the trench is enlarged using an etching solution having a composition based on the material in which the initial trench is formed, e.g., a silicon substrate or an insulation film. Therefore, a metal wiring, an isolation film or a contact can be formed in the enlarged trench to desired dimensions.